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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/507,299

09/10/2004

Masashi Yasumatsu

KOMI:032

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EXAMINER

NOTE, JANIS L

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

11/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/507,299

Applicant(s)

YASUMATSU ET AL.

Examiner

Janis L. Dote

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on Sep. 11, 2007, has been entered.

2. The examiner acknowledges the amendments to claims 7 and 9 filed on Aug. 8, 2007, which was entered upon the filing of the RCE on Sep. 11, 2007. Claims 7-10 are pending.

3. The objection to the specification under 35 U.S.C. 132, set forth in the office action mailed on May 11, 2007, paragraph 3, has been withdrawn in response to the amended paragraph beginning at page 6, line 15, of the specification, filed on Sep. 11, 2007.

The rejections of claims 7-10 under 35 U.S.C. 112, second paragraph and first paragraph, set forth in the office action mailed on May 11, 2007, paragraphs 5 and 7, respectively, have been withdrawn in response to the amendments to claims 7 and 9

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filed on Aug. 8, 2007, which were entered upon the filing of the RCE.

The rejection of claims 7-10 under 35 U.S.C. 103(a) over US 5,500,318 (Tanikawa) combined with US 4,427,585 (Beffa'585), set forth in the office action mailed on May 11, 2007, paragraph 11, has been withdrawn in response to the amendments to claims 7 and 9 filed on Aug. 8, 2007, which were entered upon the filing of the RCE. Those amendments to claims 7 and 9 limited the metal coordinating to the monoazo compound to "Fe." None of the cited prior art, in particular Beffa'585, discloses or teaches the iron containing monoazo compound as recited in instant claims 7 and 9.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,077,168 (Ogami) combined with US 5,204,453 (Chambon).

Ogami discloses a toner comprising a colorant, a particular binder resin, and a charge controlling agent dispersed therein at a concentration of at least 0.3 % by weight, wherein the charge controlling agent has a particle distribution such that

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"the area ratio of particles having a particle size larger than 2.5 μm is at least 80% based on the section of the toner."

Col. 2, lines 10-22, and col. 4, lines 6-9. According to Ogami, said toner has a wide fixing temperature range and a high fixing ratio without being influenced by the environment or the kind of copying machine. Col. 2, lines 3-9. Ogami teaches that in order to produce such a charge controlling agent particle distribution, it is preferred that a charge controlling agent having a median diameter based on volume of at least 5 μm be incorporated and dispersed in the particular binder resin.

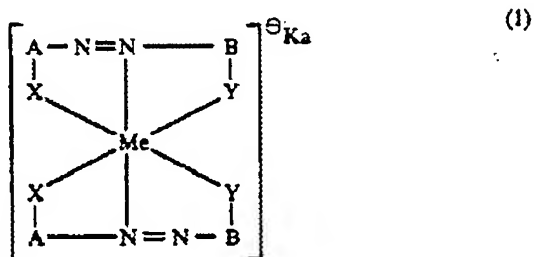
Col. 3, lines 31-39; and col. 4, lines 7-13. Ogami teaches that the charge controlling agent is preferably a metal-containing complex dye, especially a 2:1 type metal-containing complex salt dye (dye molecule/metal = 2/1). Ogami teaches that the dye can be represented by the formula disclosed at col. 4, lines 20-40, where the metal is Cr, Co, Fe, Ni, or Cu. Ogami teaches that the metal complex salt dye can be synthesized by known means and is then pulverized and classified to obtain the desired particle diameter. Col. 4, lines 41-44.

Ogami does not exemplify a charge controlling agent comprising the metal-containing complex compound as recited in the instant claims. However, as discussed above, Ogami teaches

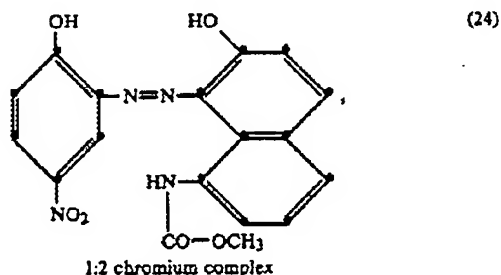
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that the charge controlling agent can be a 2:1 type Fe-containing complex salt dye.

Chambon discloses a symmetrical 1:2 metal complex azo dye (metal: two identical azo ligands = 1:2) of the formula (1) disclosed at col. 7, lines 10-26, of Chambon, as shown below.



Chambon teaches that the metal "Me" in the 1:2 metal complex azo dye of formula (1) is chromium, cobalt, or iron, and that "Ka" is a cation. Col. 7, lines 24-25. Chambon teaches that the azo dye is either in the form of a free acid or in the form of a salt, such as sodium, potassium, or ammonium salt. Col. 13, lines 4-9. According to Chambon, the symmetrical 1:2 metal complex azo dye of formula (1) may be represented by the 1:2 chromium complex of azo dye (24) disclosed at col. 12, lines 15-20, shown below.



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The monoazo compound in azo dye (24) comprises a phenyl group substituted with a nitro group and a naphthyl group substituted with the group -NHCO-OCH_3 , which is within the compositional limitations of the group -NHCO-O-R^6 when R^6 is an alkyl group comprising 1 to 18 carbon atoms as recited in instant claims 7 and 9. The Chambon 1:2 (metal: two identical azo ligands) metal complex azo dye (24) meets the Ogami 2:1 type metal-containing complex salt dye (dye molecule/metal = 2/1).

The Chambon 1:2 chromium complex of azo dye (24) meets the monoazo metal compound compositional limitations of formulas (I) and (II) recited in instant claims 7 and 9, respectively, but for the metal being iron. However, as discussed supra, Chambon teaches that the metal in its 1:2 metal complex azo dye can equally be chromium, cobalt, or iron. Col. 7, line 24. The group of three metals is sufficiently small that disclosure of the group is a full disclosure of the individual members. See In re Schaumann, 197 USPQ 5 (CCPA 1978) (disclosure of a small genus is a teaching of each member of the genus). Thus, based on the teachings in Chambon, it would have been clear to a person having ordinary skill in the art that the inventors in Chambon clearly envisaged the symmetric 1:2 iron complex of azo dye (24), which meets the compositional limitations of

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formulas (I) and (II) recited in instant claims 7 and 9, respectively.

Chambon does not disclose that the symmetric 1:2 iron complex of azo dye (24) is "resistant to sublimation" as recited in instant claims 7 and 9. However, as discussed above, the symmetric 1:2 iron complex of azo dye (24) taught by Chambon meets the compositional limitations of formula (I) and (II) recited in instant claims 7 and 9, respectively. "A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)." See MPEP 2112.01.II. Accordingly, it is reasonable to presume that the symmetric 1:2 iron complex of azo dye (24) taught by Chambon has the sublimation property recited in instant claims 7 and 9. The burden is on applicants to prove otherwise. Spada, supra.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Ogami and Chambon, to adjust, through routine experimentation, the particle size of the symmetric 1:2 iron complex azo dye (24) taught by Chambon, such that the resultant 1:2 iron complex azo dye has a volume median particle diameter of 5 μm as taught by Ogami. It would

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have also been obvious for that person to use the resultant 1:2 iron complex azo dye as the Ogami charge controlling agent in the toner disclosed by Ogami. That person would have had a reasonable expectation of successfully obtaining a toner having the properties taught by Ogami.

6. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,500,318 (Tanikawa) combined with Chambon.

Tanikawa discloses a toner comprising a colorant, a particular binder resin, and a charge controlling agent. Tanikawa teaches that the binder resin can be a styrene-acrylate copolymer having an acid value of 7.1 mg KOH/g, which is within the acid range of 5 to 50 mg KOH/g recited in instant claims 8 and 10. See resin B at col. 18, line 61, to col. 19, line 7, and in Table 1 at col. 19; and example 2 at col. 21. Tanikawa further teaches that the binder resin can be a polyester resin having preferably an acid value of at most 50 mg KOH/g. Col. 10, lines 26-28. The upper limit, 50 mg KOH/g, of the Tanikawa acid value range of "at most 50 mg KOH/g" is within the acid value range recited in instant claims 8 and 10. The Tanikawa acid value range of "at most 50 mg KOH/g" also overlaps the acid value range recited in instant claims 8 and 10. The Tanikawa binder resin meets the compositional limitations of the

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binder resin recited in instant claims 8 and 10. Tanikawa teaches that the colorant can be an appropriate pigment or dye or can be a magnetic material. Col. 16, lines 44-47; and col. 16, line 64, to col. 17, line 2. According to Tanikawa, its toner has sufficient anti~~-~~offset properties and has excellent fixing properties. Col. 3, lines 35-43; col. 20, lines 55-59; and Table 3 at col. 23, example 2.

Tanikawa does not exemplify a toner comprising the monoazo compound recited in instant claims 7 and 9. However, Tanikawa teaches that the charge controlling agent can be an organic metal complex, such as an azo metal-containing complex salt dye as shown in formula (I) disclosed at col. 12, lines 30-48; and col. 15, lines 36-38. Tanikawa teaches that the coordinating metal in the azo metal-containing complex can be Sc, Ti, V, Cr, Co, Ni, Mn, or Fe. Col. 12, lines 40-41. Tanikawa further teaches that the cation can be hydrogen, sodium, potassium, ammonium, or aliphatic ammonium. Col. 12, lines 47-48.

Chambon discloses a symmetric 1:2 iron complex azo dye that meets the compositional limitations of formulas (I) and (II) recited in instant claims 7 and 9, respectively. The discussion of Chambon in paragraph 5 above is incorporated herein by reference. The Chambon symmetrical 1:2 (metal: two identical

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azo ligands) iron complex azo dye also meets the Tanikawa azo metal-containing complex of formula (I).

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Tanikawa and Chambon, to use the symmetric 1:2 iron complex azo dye taught by Chambon as the charge controlling agent in the toner disclosed by Tanikawa. That person would have had a reasonable expectation of successfully obtaining a toner having the properties taught by Tanikawa.

7. Applicants' arguments filed on Aug. 8, 2007, as applicable to the rejections in paragraphs 5 and 6 above have been fully considered but they are not persuasive.

Applicants assert that none of the references teaches or suggests all of the elements of the claimed invention. Applicants assert that none of the references teaches or suggests the azo metal-containing complexes that are resistant to sublimation recited in instant claims 7 and 9. Applicants further assert that there is no suggestion in Chambon to use the disclosed dye as a component of a toner. Applicants also assert that there is nothing in the references that "would have suggested the desirability of combining any portions thereof

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effectively to anticipate or suggest applicants' presently claimed invention."

Applicants' assertions are not persuasive. As discussed in the rejections in paragraphs 5 and 6 above, Chambon teaches a 1:2 iron-azo complex that meets the compositional limitations of formulas (I) and (II) recited in instant claims 7 and 9, respectively. For the reasons discussed in the rejections, it is reasonable to presume that the 1:2 iron-azo complex taught by Chambon is also resistant to sublimation as recited in the instant claims. There is no evidence in the present record to show otherwise.

Furthermore, the reasons for combining the references do not have to be those of applicants. As discussed in the rejections in paragraphs 5 and 6 above, each of the primary references, Ogami and Tanikawa, provides reason and suggestion to use known dyes, such as the azo dye disclosed in Chambon, as the charge controlling agent in their respective toners.

Accordingly, the combined teachings of the references in paragraphs 5 and 6 render prima facie obvious the toner recited in the instant claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L.

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Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD

Oct. 26, 2007

Janis L. Dote
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PRIMARY EXAMINER
GROUP 1600-
1700